

composition composite. The clay component of US '645 is *intercalated* with an inorganic metal precursor. Thus, US '645's process does not at all anticipate or render obvious the claimed process.

As is clear from the description at, *e.g.*, page 2, lines 24-35, and also implicitly throughout the specification, bridging is not the equivalent of intercalation.

The *bridged clay* of the present invention is a clay in which its two adjacent lamellae are connected together with the help of the metal compound of the invention, the latter having a *chemical link* with each of these lamellae. As understood by one of ordinary skill in the art, a chemical link is strong and irreversible. Thus, for obtaining a bridged clay of the invention, a metal compound must be inserted between the lamellae and bound chemically with them.

A distinction between bridging and intercalating is that intercalating does not comprise the "chemical link" aspect of bridging. This distinction between bridging and intercalating is captured and reflected by use of the term "bridged" in Claim 12.

A person of ordinary skill in the art understands the above definition for the term "bridged" as recited in Claim 12 (two adjacent lamellae are connected together with the help of a metal compound, the metal compound having a chemical link with each of the lamellae) and understands that a bridged clay is distinct from US '645's disclosure of intercalating an inorganic metal precursor. Specifically, a person of ordinary skill in the art understands that US '645 discloses a process for preparing a polymer and layered inorganic composition composite, wherein the clay component is only intercalated with an inorganic metal precursor.

As an example of a preparation of a bridged clay of the invention, Applicants refer to Example 3 at pages 7 and 8. Starting from a metal compound in hydroxide state, an appropriate heat treatment (300°C for 3 hours) serves to form a metal compound in an oxide state and hence to create conditions of the formation of chemical links involved in bridging, as previously described. US '645 does not disclose the preparation of a bridged clay, and US '645 does not disclose the conditions needed to bridge, as, for example, no appropriate heat treatment is disclosed.

RESPONSE

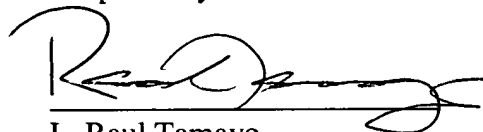
U.S. Appln. No. 10/689,543

For the foregoing reasons, Applicants respectfully request that the Examiner reconsider and withdraw the rejection.

Reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, she is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



L. Raul Tamayo
Registration No. 47,125

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: November 18, 2004